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PIC/D-63-60 11 May 1960

MEMORANDUM FOR: Deputy Director (Support)

THROUGH:

Deputy Director (Intelligence)

SUBJECT:

Contact Lenses for PIC Personnel

1. PROBLEM:

To increase the efficiency of PIC personnel who wear eyeglasses and are required to use tubular optical devices in their work.

FACTS BEARING ON THE PROBLEM:

- Success in exploiting intelligence from photography is directly related to the ability of Intelligence Officers to see images on the viewing surface.
- New and improved high magnification devices are being developed and purchased for the Photographic Intelligence Center in order to fully exploit existing photography for intelligence information. These devices utilize to an increasing extent closed optical systems of tubular design, both monocular and binocular.
- c. PIC has a large investment in tubular optical devices, and is continuing to develop them as the state of the art advances.
- d. These devices pose special viewing problems for Intelligence Officers who are required to wear eyeglasses to achieve normal eyesight.

3. DISCUSSION:

a. As a result of the better image quality derived from photographic collection systems, PIC is utilizing to an increasing extent high magnification devices for full and complete exploitation of existing intelligence imagery. The requisite magnifications (10, 20, 30 or 50 diameters) have brought about a greater reliance on closed optical systems of tubular design. The total cost of such devices now on hand in PIC is of considerable magnitude and includes such items as Bausch & Lomb Microscopes, Wild Stereomicroscopes, Mann Comparator, Nistri Stereocomparator, Bausch & Lomb Film Viewers, and many others.

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- b. Investigation demonstrates that each of these devices pose special viewing problems for those Intelligence Officers who are required to wear eyeglasses to achieve normal eyesight. These problems are caused by the design of the various viewing systems and result in a loss of efficiency to personnel who wear glasses. Two examples of the design features which result in efficiency losses are as follows:
 - (1) When the viewed image is focused at the plane of the viewing optics, a person wearing glasses can see only a portion of the available image. Such a condition requires a constant manual manipulation of the viewed material to permit complete observation, and creates the risk of failing to recognize significant relationships within an intelligence target area.
 - (2) Some instruments utilize rubber eyecups which make it impossible for a person wearing eyeglasses to see an image at the optimum plane of focus. In addition, these devices present images at relatively low light levels, and since a person wearing glasses cannot enclose his eyes within the eyecups, a considerable amount of sidelight impinges on his view tending to drown out low contrast detail.
- c. In order to eliminate the loss of efficiency encountered by personnel wearing eyeglasses, two courses of action are available. The first of these would entail the modification of all tubular optical systems to overcome the limiting factors now affecting the visually handicapped. Such a solution would entail a very heavy money outlay and a considerable time loss for engineering and actual modifications. The second solution would entail equipping handicapped personnel with fitted contact lenses. This would be a more economical answer to the problem and would result in no loss of time for equipment modification.
- d. Present medical experience seems to indicate that approximately 95% of those persons equipped with contact lenses experience little difficulty in becoming used to them. It should be further noted that contact lenses are equal to conventional eyeglasses in their vision correction ability. Contact lenses cost approximately \$175 per person for fitting and purchase. Because of the high cost involved for an individual employee, it is felt that the Agency should bear the expense for those persons who are required to use these instruments to more efficiently perform their duties.

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Deputy Director APPROVED:	